	Support in Applicants' Parent Appln. Ser. No. 461,684 filed on 1/8/90 U.S. Patent No. 5,209,723 to Twardowski et al.	ig. 2; col. 4, line 1.	lines 28-44.	Figs. 1, 3, and 4; col. 5, lines 27-33.	Figs. 1, 5, and 6; col. 4, lines 55-59; col. 7, lines 1-30.		
ibit B	Support in Applicants' Present Specification	2; p. 14	Figs. 1 and 3; pp. 18-19.	Figs. 1, 3, and 4; p. 16.	Figs. 1, 5, and 6; pp. 14, 20, and 21.		
Exh	Applicants'	1. A catheter for hemodialysis which comprises a flexible catheter tube defining a plurality of separate	lumens, said catheter defining an arc angle of generally U-shape in its natural, unstressed	said catheter may be implanted with a distal catheter portion residing in a vein of a patient, said distal catheter portion being of substantially the shape of said vein in its	condition, and a proximal catheter portion residing in a surgically created tunnel extending from said vein and through the		
	U.S. Patent No. 5,156,592 to Martin et al.	1. A flexible catheter for prolonged vascular access, the catheter comprising: an elongate flexible and tubular body	having a proximal portion portion, a distal portion and a permanently curved portion linking the	proximal and distal portions so that the curved, the proximal and the naturally in essentially the same plane with the angle contained between the proximal and distal portions being less than	extending continuously through said portions and lying substantially at right angles to said plane to divide the		

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Applicants Claims

and end intake outgoing fluid and at opening than distal end of the distal opening essentially tubes from the between distal the proximal fluid extending continuously at lumen at a proximal including to said portions incoming fluid and at outlet lumen; said ith portions being less substantially portions the the generally D-shaped of the body remote portion lumens; outlet septum for receiving the for returning the body into portion and inclu least one intake outlet the proximal and receive incoming 3 on angles to angle contained divide from the intake plane fluid in a tip formed coupled to the curved and Ø and outlet distal to supply naturally one to the same 90°, and outgoing through tubular portion the intake lying right plane to

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Support in Applicants" Parent Appln. Ser. No. 461,684 filed on 1/8/90 U.S. Patent No. 5,209,723 to Twardowski et al.	Fig. 2.	Figs. 1 and 5.	Figs. 1, 3, and 4; col. 5, lines 35-43. (Cuffs 42, 42a, 42b.)	Figs. 1, 3, and 4; col. 5, lines 35-43. (Cuffs 42, 42a, 42b.)
Support in Applicants' Present Specification	Fig. 2.	Figs. 1 and 5.	Figs. 1, 3, and 4; p. 16. (Cuffs 42, 42a, 42b).	Figs. 1, 3, and 4; p. 16. (Cuffs 42, 42a, 42b.)
Applicants' Claims	20. The flexible catheter of claim 19 in which said portions are round in cross-section.	21. The flexible catheter of claim 20 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	22. The flexible catheter of claim 21 further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.	23. The flexible catheter of claim 20 further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.
U.S. Patent No. 5,156,592 to Martin et al.	2. A flexible catheter as claimed in claim 1 in which said portions are round in cross-section.	3. A flexible catheter as claimed in claim 2 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	4. A flexible catheter as claimed in claim 3 and further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.	5. A flexible catheter as claimed in claim 2 and further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.

U.S. Patent No. 5.156,592 to Martin et al. 6. A flexible catherer comprising a cut further comprising a cut further comprising a cut further comprising a cut further comprising and remained in claim 1 mod catherer of fibrous material aurrounding the body where the proximal portion meets the curved portion meets the cut of the cut and a claimed in claim 1 in which the tip includes and forming an extension bending and forming an extension bending and forming an extension to the return lumen. 8. A flexible catherer captising a claim of the at least one intake opening at a side of the distal portion, and in which the return lumen. 8. A flexible catherer captising a transfer proximal portion, and in which the at least one intake opening is at a side of the distal portion, and in which the cylindrical extension is at a side of the proximal portion remote from the portion remote from the portion.	·.			
Support Applicants' Aflexible catheter Aflexible catheter Aflexible catheter Aflexible catheter Aflexible catheter Aflexible catheter Comprising a cuff further comprising a cuff forming an extension and forming an extension are return lumen. Aflexible catheter of claim 19 in which the doction facing the copening at the end smoothly into the body forming an extension are return lumen. Aflexible catheter of claim 19 in which the at least one extension and forming an extension are return lumen. Aflexible catheter of claim 19 in which the at least one intake opening is at a side of the distal confident at a side of the distal manual				
U.S. Patent No. 5,156,592 to Martin et al. Aflexible catheter Aflexible catheter 24. The flexible Claims Aflexible catheter 24. The flexible catheter of claim 19 further comprising a cuff further of fibrous material surrounding the body where the proximal portion meets the curved portion produces and forming an extension the at least one and forming an extension forming an				
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A flexible catheter laimed in claim 1 and catheter of claim 19 learned in claim 1 and catheter of claim 19 ounding the body where the proximal portion meets the curved portion. A flexible catheter the at least one extension actaning an extension actaning at the end smoothly into the body and forming an extension to the body and forming an extension actaning at the at least one match the tip includes and extension the tip includes and extension the the pody and forming an extension to the outlet lumen. A flexible catheter 25. The flexible and strengion extension to the body amoothly into the body and forming an extension to the outlet lumen. A flexible catheter 26. The flexible staid a side of the distal portion, and in which the extension is at a side of the distal istal portion remote proximal portion remote from the proximal portion remote from the proximal portion. 27. The flexible and forming an extension is at a side of the distal portion remote from the proximal portion. 28. The flexible (Cuffs 42, 42a, 42a, 42a, 42a, 42a, 42a, 42a,		. Patent 156,592 t tin et a	Applicants' Claims	ort ican esen fica
A flexible catheter laimed in claim 1 in which the tip includes an extension bending and forming at the end extension blending and forming an extension blending and forming an extension blending an extension are return lumen. A flexible catheter control forming an extension and in the at least one intake opening is at a side of the distal portion, and in which the extension is at a side of the proximal portion. A flexible catheter control forming is at a side of the distal a side of the distal portion remote proximal portion. A flexible catheter control forming is at a side of the distal a side of the distal a side of the proximal portion. A flexible catheter control forming is at a side of the distal a s		A flexible cathete laimed in claim 1 her comprising a cibrous material ounding the body e the proximal ion meets the curvion.	19 g a al ody 1 cur	gs. 1, 3, and uffs 42, 42a,
A flexible catheter 26. The flexible catheter of claim 25 in which the at least one intake opening is at a side of the distal the cylindrical the proximal portion remote the proximal portion.		A flaim claim chart the ich che ich che ich che ich chich chich chily form che re	Ε Ο	. 1; p. 15;
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Ser. No. 461,684 filed on 1/8/90 U.S. Patent No. 5,209,723 to Twardowski et al.	Figs. 1-5.	Figs. 1 and 5.	Figs. 3 and 4; col. 6, lines 34-44. Note that the "almost 180° arc angle" disclosed in this patent is substantially the same as an "angle" of near 0° as the angle is defined in this claim.	Figs. 1, 3, and 4; col. 5, lines 35-43. (Cuffs 42, 42a, 42b.)
Support in Applicants' Present Specification	Figs. 1-5.	Figs. 1 and 5.	Figs. 3 and 4; pp. 18-19. Note that the "almost a 180° arc angle" disclosed in this application is substantially the same as an "angle" of near 0° as the angle is defined in this claim.	Figs. 1, 3, and 4; p. 16. (Cuffs 42, 42a, 42b.)
Applicants' <u>Claims</u>	27. The flexible catheter of claim 26 in which said portions are round in cross-section.	28. The flexible catheter of claim 27 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	29. The flexible catheter of claim 28 in which said angle is in the range of 0°-20°.	30. The flexible catheter of claim 26 further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.
U.S. Patent No. 5,156,592 to Martin et al.	9. A flexible catheter as claimed in claim 8 in which said portions are round in cross-section.	10. A flexible catheter as claimed in claim 9 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	as claimed in claim 10 in which said angle is in the range of 0°-20°.	12. A flexible catheter as claimed in claim 8 and further comprising a cuff of fibrous material surrounding the body where the proximal portion meets the curved portion.

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Support in Applicants' Parent Appln. Ser. No. 461,684 filed on 1/8/90 U.S. Patent No. 5,209,723 to Twardowski et al.	Fig. 1.	Figs. 1-5.	Figs. 1 and 5.	Figs. 3 and 4; col. 6, lines 34-44. Note that the "almost 180° arc angle" disclosed in this patent is substantially the same as an "angle' of near 0° as the angle is defined in this claim.
Support in Applicants' Present Specification	Fig. 1.	Figs. 1-5.	Figs. 1 and 5.	Figs. 3 and 4; pp. 18-19. Note that the "almost a 180° arc angle" disclosed in this application is substantially the same as an "angle" of near 0° as the angle is defined in this claim.
Applicants' <u>Claims</u>	31. A flexible catheter of claim 19 in which the at least one intake opening is at a side of the proximal portion, and in which the outlet opening is at a side of the distal portion remote from the proximal portion remote from the proximal	32. The flexible catheter of claim 31 in which said portions are round in cross-section.	33. The flexible catheter of claim 32 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	34. The flexible catheter of claim 33 in which said angle is in the range of 0°-20°.
U.S. Patent No. 5,156,592 to Martin et al.	13. A flexible catheter as claimed in claim 1 in which the at least one intake opening is at a side of the distal portion, and in which the outlet opening is at a side of the distal portion remote distal portion remote . from the proximal portion remote .	14. A flexible catheter as claimed in claim 13 in which said portions are round in cross-section.	as claimed in claim 14 in which the diameter of the proximal portion is greater than the diameter of the distal portion.	16. A flexible catheter as claimed in claim 15 in which said angle is in the range of 0°-20°.

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of disclosed in this substantially Note that "angle" angle i col 180° same as an the 34-44. and "almost 98 in patent is 0 defined angle" Figs. lines near the

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least one intake opening for receiving the incoming fluid and at least one outlet opening for returning the outgoing fluid.